

CLAIMS

Sub B 17

1. A method comprising:  
un-spooling a roll of wide magnetic tape,  
5 cutting the wide magnetic tape into a number of individual narrow magnetic tape strands,  
lapping each of the individual narrow magnetic tape strands prior to re-spooling,  
and  
re-spooling each of the individual narrow magnetic tape strands following  
10 lapping.
2. The method of claim 1, further comprising wiping each of the individual narrow magnetic tape strands prior to re-spooling.
- 15 3. The method of claim 1, further comprising lapping each of the individual narrow magnetic tape strands by separately controlling tension on each of the individual narrow magnetic tape strands.
4. The method of claim 3, wherein separately controlling tension on each of the  
20 individual narrow magnetic tape strands involves separately controlling tension using a number of magnetic clutch mechanisms, wherein each of the number of magnetic clutch mechanisms individually controls tension in each of the individual narrow magnetic tape strands.
- 25 5. The method of claim 1, further comprising separating the number of individual narrow magnetic tape strands into even numbered individual narrow magnetic tape strands and odd numbered individual narrow magnetic tape strands, wherein lapping each of the individual narrow magnetic tape strands prior to re-spooling comprises lapping the even numbered individual narrow magnetic tape strands using a first lapping unit and  
30 lapping the odd numbered individual narrow magnetic tape strands using a second lapping unit.

6. The method of claim 5, further comprising wiping the even numbered individual narrow magnetic tape strands using a first wiping unit and wiping the odd numbered individual narrow magnetic tape strands using a second wiping unit.

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7. The method of claim 6, further comprising re-spooling the even numbered individual narrow magnetic tape strands on a spool and re-spooling the odd numbered individual narrow magnetic tape strands on another spool.

10 8. A lapping station for magnetic tape comprising:  
a first lapping unit that laps a first set of magnetic tape strands; and  
a second lapping unit that simultaneously laps a second set of magnetic tape strands.

15 9. The lapping station of claim 8, wherein the first lapping unit adjustably engages the first set of magnetic tape strands, and wherein the second lapping unit adjustably engages the second set of magnetic tape strands.

20 10. The lapping station of claim 8, further comprising:  
a first wiping unit that wipes the first set of magnetic tape strands; and  
a second wiping unit that simultaneously wipes the second set of magnetic tape strands.

25 11. The lapping station of claim 10, wherein each wiping unit includes a vacuum in fluid communication with a number of apertures to respectively draw the magnetic tape strands in the respective set of magnetic tape strands against a wiping material.

30 12. The lapping station of claim 11, wherein the wiping material of each wiping unit moves over the apertures in a direction opposite the magnetic tape strands.

13. The lapping station of claim 10, wherein the lapping unit adjustably engages the first set of magnetic tape strands, wherein the first wiping unit adjustably engages the first set of magnetic tape strands, wherein the second lapping unit adjustably engages the second set of magnetic tape strands, and wherein the second set of wiping units  
5 adjustably engages the second set of magnetic tape strands.

14. The lapping station of claim 10, further comprising a first number of lapping units that lap the first set of magnetic tape strands; and  
10 a second number of lapping units that simultaneously lap the second set of magnetic tape strands.

15. The lapping station of claim 10, wherein at least one of the first number of lapping units lap top sides of the first set of magnetic tape strands and at least one of the first number of lapping units lap bottom sides of the first set of magnetic tape strands, and  
15 wherein at least one of the second number of lapping units lap bottom sides of the second set of magnetic tape strands and at least one of the second number of lapping units lap bottom sides of the second set of magnetic tape strands.

16. The lapping station of claim 14, further comprising a first number of wiping units  
20 that wipe the first set of magnetic tape strands; and  
a second number of wiping units that simultaneously wipe the second set of magnetic tape strands.

17. A system comprising:  
25 a slitting station that cuts a wide magnetic tape into a number of individual narrow magnetic tape strands;  
a lapping station that simultaneously laps the individual narrow magnetic tape strands; and  
a re-spooling station that spools the number of individual narrow magnetic tape  
30 strands.

18. The system of claim 17, wherein the slitting station separates the number of individual narrow magnetic tape strands into even numbered individual narrow magnetic tape strands and odd numbered individual narrow magnetic tape strands.

- 5 19. The system of claim 18, wherein the lapping station includes:  
a first lapping unit that laps even numbered individual narrow magnetic tape strands; and  
a second lapping unit that simultaneously laps odd numbered individual narrow magnetic tape strands.

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20. The system of claim 19, wherein the first lapping unit adjustably engages even numbered individual narrow magnetic tape strands, and wherein the second lapping unit adjustably engages odd numbered individual narrow magnetic tape strands.

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21. The system of claim 19, wherein the lapping station further includes:  
a first wiping unit that wipes even numbered individual narrow magnetic tape strands; and  
a second wiping unit that simultaneously wipes odd numbered individual narrow magnetic tape strands.

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22. The system of claim 21, wherein the first lapping unit adjustably engages even numbered individual narrow magnetic tape strands, wherein the first wiping unit adjustably engages even numbered individual narrow magnetic tape strands, wherein the second lapping unit adjustably engages odd numbered individual narrow magnetic tape strands, and wherein the second wiping unit adjustably engages odd numbered individual narrow magnetic tape strands.

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23. The system of claim 22, wherein each of the wiping units includes a number of apertures that respectively draw the magnetic tape strands in the respective set of  
30 magnetic tape strands against wiping material.

24. The system of claim 17, wherein the rewind station includes a tension control unit to control tension in the number of individual narrow magnetic tape strands.

25. The system of claim 18, wherein the rewind station includes a first tension control unit to independently control tension in each of the even numbered individual narrow magnetic tape strands and a second tension control unit to independently control tension in each of the odd numbered individual narrow magnetic tape strands.

26. The system of claim 25, wherein each of the first and second tension control units include magnetic clutch mechanisms.

27. A system comprising:  
a lapping station that laps a wide magnetic tape;  
a slitting station that cuts the wide magnetic tape into a number of individual narrow magnetic tape strands after the wide magnetic tape has been lapped and prior to re-spooling; and  
a re-spooling station that spools the number of individual narrow magnetic tape strands.

28. A method comprising:  
un-spooling a roll of wide magnetic tape,  
lapping the wide magnetic tape prior to cutting and re-spooling,  
cutting the wide magnetic tape into a number of individual narrow magnetic tape strands prior to re-spooling; and  
re-spooling each of the individual narrow magnetic tape strands following cutting.